

Balmer Lawrie & Co. Ltd.

P-43, Hide Road Extn., Kolkata-700088

G&L Division, Kolkata – 700088

Phone: 24505-300 Fax: 24392277

Email: ghatak.a@balmerlawrie.com

TENDER NO. M2/PUR/374/14-15 DTD 27.02.15 (DUE ON 12.03.15- IST 3:00 PM)

INTRODUCTION

- 1.1 Balmer Lawrie & Co. Ltd, a Govt of India Enterprise under the Ministry of Petroleum & Natural Gases, is conglomerate of Strategic Business Units [SBUs] in various manufacturing & service sectors with plants and offices at different locations in India. The SBU : Greases & Lubricants is one of the manufacturing businesses of the Company, having Head Quarters at P-43, Hide Road Extension, Kolkata – 700 088.
- 1.2 The SBU: Grease & Lubricants Division, Kolkata invites Online tenders from competent authority for executing job on turnkey basis for supply, installation, testing & commissioning of IP based wireless surveillance CCTV system at aforesaid location.
- 1.3 The proposed system is intended to monitor all the critical operational areas of the location & fully cover the perimeter along with all the access points.

The broad objectives of the system are:
 1. Full perimeter coverage for detection of any intrusion.
 2. Enhancement of operational control by covering critical areas.
 3. Recording of camera outputs for analyzing critical events
 4. Access points monitoring with motion detection alarms
- 1.4 The system is required to ensure effective security and surveillance of an area as well as create a tamper proof record for post event analysis. The surveillance system should provide an online display of video images on monitors at main control room, security control room and Plant Head's room.
 - 1.4.1 The system should have sophisticated tracking analytics with powerful filtering to detect significant activities in the plant and alert approach for breaching parameters people running or loitering and speeding vehicles etc.
- 1.5 It should facilitate viewing of live and recorded images and controlling of all cameras by authorized users only.
- 1.6 It should provide inter-operability of hardware, OS, software, networking, printing, database connectivity reporting and communication protocols. System expansion should be possible through off-the-shelf available hardware.
- 1.7 The functions intended from the video surveillance system as described in this document, shall be as follows not limited to the following:
 - a) To provide continuous surveillance of the protected areas viz. operating areas, security areas , perimeter and other vital locations during daytime as well as night time.
 - b) To provide remote plant overview by manual command or automatic selection. System should be capable of remote/recording and control for future expansion.
 - c) To provide alerts and alarms on intrusion and any other events as specified, at the gates, perimeter other critical areas etc, along with auto recording of the event.
 - d) To monitor entry & exit of all vehicles and human beings at the main gate and keep recording of the same.

- e) To provide overview of vehicle parking areas, truck loading and unloading areas, tank truck loading and unloading area for proper monitoring of vehicle movement aid in avoiding congestion at any of these points.
- f) To provide an overview of critical areas of oil storage tanks, truck lanes of the factory for monitoring of safe practices.
- g) To provide 2-3 monitoring stations per locations as specified.

1.8 Validity : The Offer should be valid for 90 days from the due date of the subject tender.

1.9 Completion Period: The entire job should be completed within 10-12 weeks from the date of placement of Order/LOI by BL.

1.10 LD Clause : The vendor shall be liable liquidated damages for the following.

A grace period of 7 days is permissible over & above the due date as mentioned in clause no 1.9. Beyond that LD shall be applicable @ 0.5% per week OR part thereof subject to maximum of 5% of PO value.

2.0 EARNEST MONEY DEPOSIT (EMD) & SECURITY DEPOSIT (SD)

The bidder shall submit interest-free Earnest Money Deposit of Rs. 25,000 /- (Rupees twenty five thousand only) by Pay Order / Demand Draft drawn in favour of "Balmer Lawrie & Co Ltd" payable at Kolkata with the pre-qualification bid. Pre-qualification bid without EMD shall not be considered. The EMD shall be refunded to the unsuccessful bidders within 15 days of finalization of order under this tender. The EMD of successful bidder(s) shall be retained till the submission of SD. The EMD amount may be adjusted against SD on written request of the bidder.

The successful Transporter (s) shall submit interest free SD of 5% of the order value rounded off to the nearest thousand subject to a minimum of Rs.30,000 /- , by a demand draft or in lieu of that a Bank Guarantee from a Schedule "A" Bank, of equivalent amount as per format of Balmer Lawrie & Co. Ltd, towards the satisfactory execution of the order . The SD shall be furnished within 15 days from the date of order. In case of failure to furnish SD within the stipulated time, Balmer Lawrie & Co. Ltd. shall be entitled to terminate the order and forfeit the EMD without further reference to the bidder. Small Scale Units registered with National Small Scale Industries Corporation/ MSME units are exempted from payment of EMD. Small scale units registered with National Small Scale Industries Corporation should enclose a copy of their valid registration certificate to make their quotation eligible for consideration.

2.2 This is issued at two part bids for providing the above mentioned services at the location as per terms, conditions and specifications mentioned in the tender document. Please be advised that the rates, terms and conditions finalized against this tender shall be binding.

2.3 The bidder shall have single point responsibility for the complete turnkey solution including supply, installation, testing and commissioning of the system.

2.4 Condition for quoting in this tender are as follows:

1	Tender must be accompanied by EMD as mentioned in clause no 2.0 by Bank Draft or Pay Order drawn in favour of Balmer Lawrie & Co. Ltd. Payable at Kolkata. No interest will be payable on EMD.
2	Bidder should have at least 3 years in sales, services, implementing and maintenance of CCTV systems in the relevant field(industries & factory premises)using the quoted hardware & software.
3	Bidder should be either OEM (Original Equipment Manufacturer) of CCTVs who is willing to undertake total scope of work OR an Authorized System Integrator to quote for this tender. The system Integrator suggested to submit a letter of Authorization from OEM for this specific tender. The Certificate / Authorization Letter specific to this tender must be enclosed with the Bid.
4	The Bidder should have experience in executing IP based wireless CCTV solution i.e. CCTV with not less than 20 cameras in Industry or Government, public sector establishments.

5	The Bidder should have successfully executed at least one similar order of value Rs 15 Lacs during last three financial year.
6	Letters of satisfactory performance from the organizations where similar machines have been supplied and installed to be submitted.
7	The Job should be completed within <u>10-12 weeks</u> from the date of Purchase order received. Declaration required.
8	Should have minimum turnover of Rs 2.0 Crores in any one of the last three financial year.
9	All wireless equipment should be WPC-ETA approved. The approval should be dated earlier to the date of submission of tender. Certification of WPC-ETA should be attached with technical bid
10	Wireless CCTV products should have quality system compliance with IS/ISO 9001:2000 & CCTV equipment should have UL,FCC,CE/CN certifications. Documentary proofs need to be Enclosed
11	All CCTV cameras and software, Video Management software and analytics software should be ONVIF compliant
12	Solution Assurance from VMS / VAS OEM regarding compatibility of hardware with the platform.
13	Architecture diagram clearly marking each component and brief functionality therein along with all data sheets of the products and components in soft copies as well as CD/DVDs.
14	The recognition and compliance with legal requirements.

2.5 The bidder should ensure that all the Sections along with all Annexure with all the pages are downloaded by them and any claim for non-receipt of any of the documents due to any reason will not be entertained.

2.6 Only bidders who are found to meet the pre-qualification criteria shall be considered for price bid evaluation. Bidders are requested to attach all necessary supporting documents while submitting their Technical bid/ send Hard copies in sealed Envelope before due date.

2.7 This TENDER expects respondents to:

- Study & understand the site conditions.
- Understand the functionalities expected by Balmer Lawrie for the providing the system
- Understand broad/generic technical requirements of the hardware and software for the system
- Supply, install / implement and support the system at the proposed locations.
- Detailed scope of the project is inclusively defined in Section 6.0 of this document.

If the Bidder is unable to meet our technical specifications, they may quote for the closest available substitute giving details of the same for Balmer Lawrie consideration. DEVIATION FROM OUR SPECIFICATIONS SHOULD BE SPECIFICALLY BROUGHT OUT IN A SEPARATE STATEMENT(Refer Annexure table 2).

2.8 Bidder's online submission of the documents is considered as total acceptance of the terms and conditions and hence "acceptance" need not be mentioned on each page of the offer.

2.9 Balmer Lawrie reserves the right to reject offers not meeting its Technical requirements and commercial condition.

2.10 Selection Criteria : (i) Bidders fulfilled Technical aspects as mentioned in Pre-Qualification Criteria/ Technical Bid shall be considered for Commercial evaluation. (ii) Successful Bidder for awarding Contract shall be considered based on L 1 Rate on turnkey basis, which includes supply, installation, commissioning and complying all other scope of work.

2.11 **For Pre – Bid meeting, requested contact with Mr. Susanta Bose [Mob No: 9831041295]**

3.0 CONDITIONS FOR ONLINE BID SUBMISSION

Procedure For Bid Submission

The bidder shall submit his response through bid submission to the tender on eProcurement platform at <https://balmerlawrie.eproc.in> by following the procedure given below. The bidder would be required to register on the e-procurement market place at <https://balmerlawrie.eproc.in> and submit their bids online. No offline bids shall be entertained by the Tender Inviting Authority. The bidders shall submit their eligibility and qualification documents, Technical bid, Financial bid etc., in the standard formats prescribed in the Tender documents, displayed in eProcurement web site. The bidders shall upload the scanned copies of all the relevant certificates, documents etc., if required, in support of their eligibility criteria/technical bids in the eProcurement web site. However, bulky documents need not be scanned and uploaded but physical copy of the same should be sent to the Tender Inviting Authority office before the tender opening date. The bidder shall sign on the statements, documents, certificates, uploaded by him, owning responsibility for their correctness/authenticity.

Registration with eProcurement platform:

For registration and online bid submission bidders may contact HELP DESK of M/s C1 India Pvt., Ltd., or they can register themselves online by logging in to the website <https://balmerlawrie.eproc.in>

Digital Certificate authentication:

The bidder shall authenticate the bid with his Digital Certificate for submitting the bid electronically on eProcurement platform and the bids not authenticated by digital certificate of the bidder will not be accepted on the eProcurement platform. All the bidders who do not have Digital Certificates need to obtain Digital Certificate. They may contact Help Desk of C1 India Pvt Ltd.

M/s C1 India Pvt Ltd.

C104, Sector 2 Noida-201301

Contact person:

Ritabrata Chakraborty (Kolkata), +91 8697910411

Email: ritabrata.chakraborty@c1india.com

Submission of Hard copies:

After submission of bid online, the bidders are requested to submit the demand drafts /Bank Guarantee towards tender fees and / EMD along with other documents as required, to the Tender Inviting Authority before opening of Techno-commercial /Un-priced bid. The bidder shall furnish the original DD / Bank Guarantee and other documents either in person or through courier or by post and the receipt of the same within the stipulated time shall be the responsibility of bidder. BL shall not take any responsibility for any delay or non-receipt of said documents. If any of the documents furnished by the bidder is found to be false / fabricated,

the bidder is liable for black listing, forfeiture of the EMD, cancellation of work and criminal prosecution.

The bidder is requested to get a confirmed acknowledgement from the Tender Inviting Authority as proof of submission of hardcopies.

Corrigendum to tender:

The bidder has to keep track of any changes by viewing the addendum / Corrigendum's issued by the Tender Inviting Authority on time-to- time basis in the E-Procurement platform. The Company calling for tenders shall not be responsible for any claims/problems arising out of this.

Bid Submission Acknowledgement:

The user should complete all the processes and steps required for bid submission. The successful bid submission can be ascertained once acknowledgement is given by the system through bid submission number after completing all the processes and steps. Tender Inviting Authority and C1 India Pvt. Ltd. will not be responsible for incomplete bid submission by users. Users may also note that the incomplete bids will not be saved by the system and are not available for the Tender Inviting Authority for processing.

Before uploading scanned documents, the bidders shall sign on all the statements, documents, certificates uploaded by him, owning responsibility for their correctness / authenticity.

Disclaimer Clause:

The Company (Balmer Lawrie & Co. Ltd.) nor the service provider (C1 India Pvt. Ltd.) is responsible for any failure of submission of bids due to failure of internet or other connectivity problems or reasons thereof.

4.0 PAYMENT TERMS

BL will be making payments for the job as follows:

- 50% of basic with taxes & duties of order value shall be paid (excluding post warranty AMC if any) within 15 days after receipt of material.
- Balance 40 % of basic with balance entire part of taxes & duties (excluding post warranty AMC if any) of order value shall be paid within 15 days after successful installation and commissioning, training and site / user acceptance test of entire solution (software / hardware). The bidder to obtain acceptance & project closure sign off in this respect from BL.
- 10% of basic shall be retain for one year from the date of issuing completion certificate OR shall be paid against submission of Performance Bank Gurantee.
- Quarterly prorated payment of finalised AMC amount will be made after successful completion of each quarter of respective post warranty AMC. Payment shall be released within immediate against submission of Bills, duly approved by BL representative.

The Contractor/supplier will submit the bills in triplicate to the concerned Chief Manager (HR & Admin), where the supplies are made / job is carried out. The Chief Manager, in turn shall certify the bills and forward them alongwith material received report to Chief Manager-Accounts & Finance, Balmer Lawrie SBU-G&L Kolkata-700088 for making payment.

5. PATENT /COPYRIGHT PROTECTION

- If any third party claims that a Product/Service(s) supplied by the bidder in connection with this contract here under infringes a patent or copyright, the bidder will defend BL against that claim at Bidder's expense and pay all costs, damages, and attorney's fees etc. and it would be the sole responsibility of the successful bidder to comply with all instructions that a Court finally awards.
- If such a claim is made or is likely to be made, Bidder will enable BL to continue to use, or to modify or replace the Product. If none of these alternatives is acceptable to BL, the Bidder will give BL a credit for such Product as well as for all resultant consequential losses, resulting out of the non-availability of the product for BL's use.

6. CONFIDENTIALITY

The successful bidder is bound to perform the agreement / contract in utmost confidentiality and shall not copy documents / information of the Corporation and shall not divulge any secrets or knowledge of things or processes which Bidder comes to know or acquires during the performance of the contract. Any breach on this account shall render the contract liable to be terminated by BL. BL also reserves the right to initiate appropriate legal action against the Bidder for breach of any copyright or infringement of intellectual property of BL disclosed to Bidder during the performance of the contract.

7. THIRD PARTY INSPECTION

Third party inspection shall be arranged by the vendor at their own cost by one of the following agencies- Bureau of Indian Standards / DNV / EIL / Lloyd Registrar of Shipping / Bureau Veritas/ or any authorized body.

Activities to be carried out by the third party certifying the performance as per specifications:

Third party inspection agency shall give a certificate to the effect that the entire equipment and the job carried out by the party conform to the specifications given in the purchase order. Third party inspection report and manufacturer's test certificates shall be sent to concerned plants along with the equipment. The contractor/vendor will give clear notice period offering the materials/equipment for inspection by third party. Inspection of all materials and works will be carried out by the third party to establish conformance to the acceptance criteria specified and in case the equipment and materials do not conform to the acceptance norms, they will be summarily rejected. Any cost implications as a result of deviations will be invariably to the contractor's account.

Section 6.0-DETAILED SCOPE OF WORK

8.1. OVERVIEW OF WORK

Scope of the job is to provide Turnkey Solution that includes but is not limited to supply, installation, implementation, commissioning, training, providing user manual, providing 12 months warranty and 2 years post warranty AMC for the total solution including all hardware, software, materials, services and support etc. for providing a **IP based Wireless Surveillance CTV system** at the location and as per plan mentioned in **Annexure**. Job also includes all related jobs at controlling office at the locations. All necessary cabling / wiring / sockets and allied infrastructure conforming to respective quality / standard norms are also included in the scope of this job.

8.2. **SOLUTION OVERVIEW**

- 8.2.1 The envisaged system shall be a Hybrid System with distributed architecture having control station at the HR/admin Head's room/Plant Head's room & viewing facility at the security cabin/Installation in-charge room /Any other area envisaged. Fixed Day/Night Surveillance Cameras shall be used at the entry & other strategically important points while PTZ Cameras shall be used for general surveillance of the Plant. The PTZ cameras will be stationed at the surveillance Towers/points & other areas as envisaged.
- 8.2.2 A network, comprising an 8-port & 16 ports switch each and media converters connected with CAT6, shall be laid at the plant for transmission of signal from cameras to the Control Stations. The Main Control Station(HR/Admin head) shall have a Server (with Monitoring & IVA Software) for Video Storage, a monitor, a workstation, a UPS, a Switch & a Joystick/PTZ Controller. **The Sub-Control Station at Security Guard / Installation in-charge room shall have a monitor for monitoring the Video only.**
- 8.2.3 The proposed Solution should allow BL officials to locally and centrally monitor its facilities from a remote location on a Portable/Fixed personal computer monitor/smartphones having ios, android and windows operating systems.
- 8.2.4 The Solution should capture, store, and analyse digital video images to enable central monitoring, increase operational efficiency, reduce liability, minimize risk and secure people & property.
- 8.2.5 The digital conversion should ensure secure and ready video access from virtually anywhere on BL network. Authorized personnel should be able to rapidly zero in on images of specific locations, people, and events, anytime and anywhere, without reviewing countless hours of video recordings.
- 8.2.6 The system should be provided with weather proof and vandal proof outdoor IP Fixed /PTZ Camera, lens, housing & mountings to capture video which, would be viewed & controlled through the Video Management Software, recorded and stored.
- 8.2.7 The video management software will be used to configure the video management server, and once installation and setup are complete, the video management server should run seamlessly in the background to manage the connections, access and storage. Video management server should receive MPEG-4 or better quality video across the network from Cameras. The server should stream incoming video and audio to a connected storage.
- 8.2.8 The viewing mode can be controlled remotely by a management system. The Video Management Server, Workstation, Monitors will all be placed at the control room with additional work station at Security Cabin/other areas as envisaged.
- 8.2.9 Video transmission will be over a wired and wireless network.
- 8.2.10 The vendor will commission the network as per the recommended architecture to achieve the Video surveillance requirements. However, wherever site conditions mandate a modification in the recommended architecture, the vendor should seek prior approval from BL before executing the job. Optimum speed, data transfer capabilities and video frame rates should be ensured by the vendor while implementing the solution.
- 8.2.11 Vendor should specify clearly the RMT rates for all cables (Electrical, Control & Video signal cables) including commissioning charges while participating for the Tender. Any additional cable as required physically will have to be supplied at the same rate.
- 8.2.12 Power supply source to the camera and other outdoor & indoor equipment at site will be drawn from the nearest available power source provided by BL. Appropriate outdoor casings and housings of the same make as of camera should be used for the outdoor equipments.
- 8.2.13 The Bidders shall conduct a site survey of designated plants, and evaluate the feasibility of the wired/wireless network with regards to cameras within LOS. The bill of material attached in this document is only indicative and the successful bidder has to provide the detailed BOQ & calculate the design needs and obtain BL's signoff before commencing the job.
- For the three items i.e. Poles , OFC cables & power cables , indicative qty is mentioned only for rate comparison during Tendering as it is not possible to estimate actual requirement without proper survey. Successful bidder has to supply required qty at same rate & same Terms & Conditions .

- 8.2.14 System shall allow event based and motion based alarms and schedule based recording options of location/events deemed sensitive by BL within the plant and within the range of the camera.
- 8.2.15 The Outdoor cameras shall be housed in IP66 casings. All housings shall be of the same make as that of the camera.
- 8.2.16 It should be possible to Control (Pan-Tilt-Zoom -for PTZ cameras), View and record (for all cameras) the events occurring within the range of camera at a centrally located PC at control location. The control location would be generally located at the HR & Admin building.
- 8.2.17 The Server shall make continuous recording of all cameras for 24 hrs x 7 days with hardware should have adequate storage @ 25 fps and 4 CIF for a period of 30 days. System Integrator should provide the exact storage calculation. If necessary, additional storage in form of hard disk drive shall be suggested / provided by the Vendor.
- 8.2.18 After commissioning the Video surveillance system, the same shall be demonstrated for all its capabilities to the relevant user department to make them familiar with the system on mutually agreed dates.
- 8.2.19 The system is primarily perceived as working on the concept of exception monitoring .Hence for any exception (event as pre-defined in the system like Tripwire etc) occurring , following alerts are required : i) Real time IVR as well as SMS alert at predefined mobile nos ii) email at predefined mail address iii) event hand over by Fixed camera to the corresponding PTZ camera which starts tracking the object for a predefined time period & iv)Auto Pop up of blank computer screen as well as Audio / Visual alarm at control room.
- 8.3. SYSTEM OVERVIEW
- 8.3.1 The indicative system architecture is provided in Annexure .
- 8.3.2 The INTEGRATED VIDEO SURVEILLANCE SYSTEM would consist of, but not limited to the following:
- Fixed Day/Night IP Camera
 - PTZ IP Camera
 - Video Storage Server
 - Video Analytics Server
 - Video Monitoring Workstation
 - Video Management & IVA Software
 - 32" LCD Monitor
 - 8-Port Layer-2 Unmanaged Switch
 - 24 Port Layer-2 Managed 100/1000 Mbps Switch
 - Passive Networking Components
 - Wireless Digital Transmitters & Receivers
 - 5-KVA Line Interactive UPS
 - 600 VA UPS at camera locations(junction box) or for 3-4 cameras in a group
- 8.4 GENERAL SPECIFICATIONS
- 8.4.1 Proposed IVSS shall be an open standard based integrated system aimed at providing high-speed manual/automatic operation for best performance. System should be easy to maintain. The OEM should give an undertaking that the offered software additionally supports cameras of the approved makes. All equipments used in this system should support IP V6 protocol.
- 8.4.2 Surveillance system shall use video signals from various types of indoor/outdoor cameras, process them for viewing on Monitors at Head Hr & admin's room / monitors at Security Control room/ Plant Head's room and simultaneously record all the cameras after compression using MPEG4/H.264 or better standard.
- 8.4.3 All the cameras should be capable of day and night viewing under very low light conditions.
- 8.4.4 System should be complete with IP Cameras, Switch, Server with video management software for recording, storing and playing, Colour Video Monitors, Mouse-Keyboards, PC for System Administration / Management / Maintenance etc.
- 8.4.5 System should ensure that once recorded, the video cannot be altered or tampered, ensuring that the audit trail is intact for evidential purposes. All the data

communications taking place within the network need to be AES (128 bit) encrypted and SSL authenticated so that any unauthorized access to the video data can be prevented.

- 8.4.6 System shall provide minimum storage for 24 hours X 7 days recordings of all the cameras and 30 days recordings of events based on alerts @ 25 FPS, 4 CIF quality using MPEG 4/H.264 compression techniques for all cameras. The recording resolution and frame rate for each camera shall be user program able. It shall be possible to record camera views on continuous, scheduled and event triggered basis.
- 8.4.7 The Area under surveillance shall be monitored from Admin room and security cabin.
- 8.4.8 The system should provide facility for remote viewing to log on and view any camera from anywhere.
- 8.4.9 Power for all the field equipment will be conditioned using locally connected UPS at each camera location. If any equipment operates on any voltage other than the standard supply voltage (230 V AC single phase) and supply frequency, necessary conversion/correction device of approved make for supply shall be supplied along with the equipment.
- 8.4.10 Power for all control room equipments would also be conditioned using a single line interactive UPS.
- 8.4.11 All the control equipments e.g. switch, passive networking items etc. shall be provided in a standard 6U Network Rack in the control room.
- 8.4.12 All the indoor cameras & control equipment shall be suitable for operation from 0 degree C to 50 degree C and relative humidity up to 95 % non-condensing. Cameras & other equipment, meant for outdoor installations, shall be suitable to work from (-) 10 degree C to (+) 50 degree C with RH up to 90% non-condensing. This temperature range may be achieved with blower unit if required.
- 8.4.13 Possible applications of the proposed system should include tracking movements / verification and recognition, through high quality images, of persons and objects including vehicles. The recordings of the scene of the Jurisdiction shall be helpful in case of enquiries etc. in establishing the truth.
- 8.4.14 Bidders should confirm (in writing) that all recordings will be admissible as evidence in any court of law.
- 8.4.15 Manufacturer must have service support at Kolkata.
- 8.4.16 Bidder should be able to demonstrate to the technical committee & the consultant a POC for a few features as described below comprising of one outdoor PTZ Camera, one fixed camera and System software with Analytics, PC/workstation etc.
- a) Real Time IVR alert on mobile nos. for motion detection & analytical alerts.
 - b) Real Time SMS & Email alert for any event as advised.
 - c) A seamless camera handover between a fixed & a PTZ camera & event tracking thereafter. If an analytical alert is received by the fixed camera the PTZ camera should lock on to the detected target thereafter
 - d) Camera quality testing as per technical specification with regard to the Lux levels & focal length.
 - e) The VMS should give a pop even on a Blank screen upon the receipt of alert.
- 8.4.17 To the extent possible, Cameras should be installed on the existing structures, buildings, flood light towers, watch towers etc by providing necessary brackets, hooks, nuts & bolts. After exhausting all other options if the vendor feels the requirement of the poles, same needs to be erected by him. The total height of the poles should be 10 meters including 3 meters of foundation.
- 8.4.18 Monitoring, Control & Storage application software should be capable to support:
- Optimized decoder and display engine
 - Multiple screen layouts and full screen display
 - Multi-channel monitoring and recording simultaneously
 - Manual, event driven and scheduler recording mode
 - Remote digital output and input indicator
 - Zero waiting database searching and event preview

- Remote PTZ camera control
- Hard disk storage indicator and alarm
- High compression ratio and storage capacity
- Audio monitoring / recording support
- Simultaneously multiple window controlling
- Auto launcher after PC rebooting
- Real-time monitoring, PTZ control & Recording
- Simultaneous real-time monitoring and audio and video recording
- High quality video, up to full-screen display
- Video stitching capability for a multiple no of cameras
- Triggered event browsing with at least 9 preview video windows
- Fast database searching
- Auto alarm in different ways
- Account-password protection
- Different recording modes: Event-driven, Scheduled and Manual recording for each camera
- The software should be capable enough to display video upto 16 channels on a single PC.
- The software should support the MPEG- 4/H.264 video compression
- The software should support a frame rate of 25 frames per second for PAL at 4 CIF resolution for at least (Mention Number) cameras
- The software should support AVI file format synchronized with audio/video, printer and bitmap for snapshots.
- The software should support minimum three detection windows for each channel with intelligent adaptive motion detection by modifying the sensitivity and object size.
- The playback should support various schemes with
- Date and time interval
- Event triggering with preview for every camera.
- The playback module should offer various controls like play, stop, pause, fast forward, slow forward, pull-bar, zoom in, zoom out and speed ranging from 1/16 to 16 times.
- The software should support various alarm features like monitoring 16 channels in-image motion detection indication, local warning sound etc.

8.4.19 The VMS on receiving an alert from the analytical server should have the capability to create and display an overlay on the live VMS image alerting the operator on the exact nature of alert with the exact description coming on the alarm panel.

8.4.20 The VMS should be able to receive Real Time Alarm Alerts

8.4.21 The VMS should be able to display an Overlay on the video displaying the analytics on the VMS video itself

8.4.22 The VMS should be able to trigger & pop up Real Time videos on trigger of any Video Analytic Alarm

8.4.23 The VMS should be able to send an Email, SMS, IVR Message (on a Telephone), push messages in smartphones on triggering of an Alarm alert

8.4.24 The Video management software shall be ONVIF certified.

8.4.25 VMS should be able to stitch at least 6 cameras in order to give a continuous view in one screen.

8.5 Features of Video Analytics Software (VAS)

8.5.1 VAS should be Open IP-Surveillance product, enabling simultaneous digital video recording from network, intelligent video analysis and remote access to live and recorded images from any networked computer. VAS OEM should give an undertaking that devices from reputed camera manufacturers can be used for video analytics.

- 8.5.2 VAS should be able to automatically track and classify objects such as cars ,people & other objects and push content to security personnel as required.
- 8.5.3 VAS should be capable of Real-time analysis of connected cameras to detect abnormal activity and Security threats.
- 8.5.4 VAS should jointly and simultaneously be able to manage video analytics and video management as one product.
- 8.5.5 VAS should have Automated PTZ camera control for zooming in on interesting events like motion Detection etc as picked up by Fixed Camera without the need for human intervention.
- 8.5.6 VAS should be completely scalable, with a many-to-many client-server model allowing multiple physical systems to be used in an array of Servers. The server specified in the tender document indicates only the minimum requirements. However, bidder should offer the Server system to suit the video analytics requirements specified herein.
- 8.5.7 VAS should have the flexibility of connectivity and managing network and Fixed & PTZ IP cameras
- 8.5.8 VAS should be able to filter large amounts of video and focus on human attention appropriately
- 8.5.9 VAS should support display of time Line, Customizable Site Map, Live Video, Video Playback, Integrated Site Map, Remote Live View, Multi-site capability, Encryption, Watermarking and Event based Recording
- 8.5.10 VAS should be able to do video analytics based on defined policies pre-fed at the time of installation. It should have specific features like Motion & Blackout masking, Perspective settings, environment selection, map configurations, disk usage limits, footage expirations and software health monitoring
- 8.5.11 VAS should allow to add, edit, delete or disable and enable Policies.
- 8.5.12 The definable and available triggers should be for
- Vehicles Moving – should activate alarm if it detects Vehicles moving in the scene and passing through the Alarm Mask. Object Direction may be used to further filter alarms, as well as Object Speed, Object Size.
 - Vehicles Parking – should activate alarm if vehicles are parking in Alarm Mask. The Length of Time field in seconds or minutes may be used to specify how long vehicles are able to park before the alarm
 - Tripwire / People Moving- People crossing Trigger line / jumping etc apply to People. Also loitering for a certain pre defined time period within a specified area.
 - Camera Obstructed / Out of focus - should activate alarm if the field of view is obstructed or goes out of focus.
 - Cord Cut: Will sound alarm if the video signal is lost.
 - Hardware alarm Input- Should be able receive signals from external devices through alarm and act accordingly.
 - Unknown Moving- Similar to Vehicles moving trigger, but should apply to objects which have not been classified as Human or Vehicle.
 - Object left Behind- should sound alarm if objects are discarded, such as a bag on a sidewalk for a predefined time period.
 - Object Removed- Similar to object left behind trigger, but should apply to objects removed.
- 8.5.14 Software should have Real-time Video Analysis features like:
- Motion Tracking
 - Object Classification
 - Object Counting (people/vehicles)
 - Object Persistence
 - Alarm Policy Settings:
 - Alarm on object type
 - Alarm on camera manipulation
 - Automatic Alarm Response:
 - Automatic PTZ control
 - Audible Siren

- Alarm I/O (relay)
- Text to Speech
- Email
- IVR
- Event based search
- SMS
- Push messages in smartphones

8.5.15 MIS for Video Analytics : System should have a proper MIS system for recording of various video analytics as per need . There should be provisions for acknowledging the events with remarks in the system itself & print out of a period specific list can be taken for recording purpose .

8.6 DETAILED SCOPE OF WORK

- 8.6.1 Supply, installation, testing and commissioning of Hardware and Software as per system design and schedule of quantity.
- 8.6.2 Configuration of Hardware, Networking devices and Software as per system design & site requirement.
- 8.6.3 Training on system operation to staff at the site.
- 8.6.4 Detailed training on System maintenance at site as well as at the premises of the system provider.
- 8.6.5 VIDEO SURVEILLANCE networking and integration system to be supplied and installed should be covering all the areas mentioned above.
- 8.6.6 The control station in the Hr & Admin building should be the heart of the system. Major equipments inside this control room would consist of but not limited to;
- Server
 - Server Racks
 - Power extensions for Rack & other control room equipment
 - PC/Workstation
 - Patch cords
 - Network patch panels
 - Display Monitors with fittings
 - Connectors & Ties
 - Network distribution Box.
- 8.6.7 Architecture of the system should be fully modular and should be designed in a manner to enable the complete system to be gradually enhanced and enlarged according to the future operation, safety and security requirements of the location.
- 8.6.8 Necessary alarm/indication shall be raised at the security cabin/at the monitoring station indicating that there is motion in the marked area.
- 8.6.9 The system is desired for BL (G&L's) HRC ,Kolkata plant for constant and remote video surveillance of earmarked locations and its perimeter
- a) Suggested Monitoring Locations:
- Security Gate - Exit & Entry Points - Fixed cameras
 - Overall Premises view - PTZ Cameras
 - Perimeter - Fixed cameras
 - Gantry - PTZ camera
 - Truck/tanker loading and unloading areas - PTZ camera
- b) Control and monitoring locations:
- Main Server: Administration Building

8.7 GENERAL

- 8.7.1 The system shall be designed by selecting high-grade components of proven quality and proper design of system electronics to ensure minimum down time.
- 8.7.2 The system software shall be governed by the operating system running in a real time mode and shall be able to meet the minimum functional requirements as specified.
- 8.7.3 The system shall have an extensive set of self-diagnostic routines, which shall locate and identify the system failure at least up to individual equipment level.
- 8.7.4 The system shall be internally protected against system errors and hardware damage resulting from electrical transients on power wiring and signal wiring which may be generated by switching large electrical loads or by power line faults and connecting & disconnecting devices or removing or inserting printed circuit boards in the system .
- 8.7.5 All PCs provided should be of reputed make and latest model. Assembled PCs are not acceptable to BL. Bidder should specify his criteria for capacity planning & sizing, performance criteria for arriving at the recommended configuration.
- 8.7.6 **Following authorizations shall be made available from OEMs:**
- **Technical compliance to the specifications and authorization for participating in the tender on manufacturer's behalf.**
 - **Authorization for providing copy of test reports complying the specifications at the time of inspection.**
 - **Authorization that the items quoted by the tenderer are in production and would be supported for service for at least 5 years from the date of the tender.**
- 8.7.7 All the equipment of external fitment should be weather proof IP-66 complied and vandal proof
- 8.7.8 Manufacturer must provide reference list of installation for similar products / components.
- 8.7.9 The warranty shall consist of repairing or replacing defective parts for a period of 1 year from the date of completion of commissioning at the locations with 5 years of post warranty comprehensive AMC

8.8 SPARES

- 8.8.1 Commissioning Spares:
All commissioning spares required for installation, testing and commissioning of system shall be at bidder's scope.
- 8.8.2 Warranty Spares:
All spares required for maintaining the complete system during the warranty period of 12 months shall be at bidder's scope. All Software/ Hardware upgrades should be free within this period.
- 8.8.3 Post Warranty Spares (During comprehensive AMC)
All spares required for maintaining the complete system during the comprehensive AMC period of 2 years shall be at bidder's scope. All Software/Hardware upgrades should be free within this period.
- 8.9 Drawings and Data Requirements to be submitted by Successful Bidder for the complete system
These documents shall have to be submitted by Successful Bidder in three sets after placements of Order.
- Technical Architecture of the proposed system
 - Video Management & Analytics Software specifications
 - Hardware sizing and communication backbone as envisaged prior to commencement of job.
 - Part list of all equipment.

- Certified test records of all equipment.
- Diagram of wiring connections.
- Test certificates for bought out items.
- Assembly and Installation details.
- Operation and maintenance manuals.
- All pertinent drawings.
- Completed Data sheets.
- Material specifications.

8.10 APPROVAL OF DRAWINGS

- 8.10.1 Successful Bidder after placement of order shall be fully responsible to get all drawings approved from BL before supply.
- 8.10.2 Approval of drawings by BL does not relieve the successful Bidder from his responsibility of performance guarantee of equipment covered under this tender.

8.11 SCOPE OF WORKS- INCLUSIONS

- 8.11.1 Works Included: The Scope of work has been covered in the above specifications in general. However, the successful Bidder shall be responsible to complete the works in all respects and in doing so, provide/supply all facilities not covered above specifically, but nevertheless required for the satisfactory performance of complete system. Details Scope of job includes survey of the location to estimate the exact nos. of cameras (PO indicates tentative BOQ only)& other allied items as per discussion with concerned authority of BL , Delivering the BOQ to BL , Joint Material inspection at site with BL In-Charge / His representative , Installation / Commissioning , imparting Training to location staff & Handing over the site to the Location In Charge. Dependency on BL is limited to providing adequate space to install the equipments , monitoring space & providing power connection. Exact requirement with respect to these points to be made clear to the BL in-Charge during the time of survey so that no confusion arises afterwards regarding site clearance for installation job.
- 8.11.2 Additional Works Included: Existing FLT, Watch towers, Light poles, Building tops can be considered for mounting camera and other equipments. Additional poles/towers etc if required will be constructed separately& cable supply & laying also included in the vendors scope. Power will be provided by BL.

8.12 OPERATING TERMS

- 8.12.1 The Successful Bidder should maintain the whole system on an ongoing basis, during warranty period of one year & subsequently during the comprehensive Annual Maintenance Contract (AMC) after the completion of warranty period for 5 years. During warranty period all materials / parts / services as required to maintain the system on an ongoing basis is included in the scope of the job and no extra payment will be made by BL.
- 8.12.2 Provide service support during business hours, if and when required, besides such other support like a 24/7 telephonic assistance etc., as may be required so that the system operates on a continuous basis.
- 8.12.3 Successful Bidder will be the single point contact for BL for all support related issues with respect to hardware / software installed by them. If any third party help is required in resolving any issue, it will be the sole responsibility of the bidders to arrange for such help.
- 8.12.4 Hardware OEM should have service centre in India .Details of the same to be provided along with proposal . Also copy of letter from OEM to that effect to be submitted.
- 8.12.5 SI should have at least 5 nos qualified Engineers in their master roll at the time of submitting their proposal.Bidder should submit the detailed CV along with photo of each engineer along with the proposal.

8.13 PERFORMANCE TESTING AND WARRANTY

- 8.13.1 The Successful Bidder shall carry out the performance test run of the complete system at site after satisfactory installation / implementation under his supervision. Training of

operators should be as per details mentioned in this document after commissioning of the system without any extra cost to owner.

- 8.13.2 The system provided should be guaranteed / warranted for any kind of manufacturing defects and satisfactory performance for a period of 12 months from the date of commissioning.

8.14 COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT (AMC) POST WARRANTY

- 8.14.1 Complete system will be covered under post warranty Comprehensive AMC as per rates quoted in the price bid for a period of 2 years from the date of completion of warranty. The post warranty comprehensive AMC shall be a separate annual contract for each of the 2 years period and shall be signed at beginning of the respective period. **The post warranty comprehensive AMC rates quoted in price bid for 2 years shall be included in the evaluation.**
- 8.14.2 During the post warranty comprehensive AMC period all software / services etc. as required to rectify any defect, will be provided by the successful bidder at no extra cost to BL. Material / hardware /spares as required for such maintenance would also be provided by the bidder. No extra amount is payable by BL for this post warranty AMC other than quoted AMC rates.
- 8.14.3 Comprehensive AMC comprises of the following services as a minimum
- a) Routine maintenance service: This is an on-site maintenance, which should be carried out four times in a year. Purpose of visit is to check system health and problem solving
 - b) Breakdown maintenance service: In case of system breakdown, Vendor shall depute Engineers to restore the system at the earliest, within 24 Hours.
 - c) Software support and technical services: Software additions / modifications, technical assistance to Purchaser's Engineers, technical discussions with Purchaser's Engineers /Technicians at vendor's facility etc. are included.
 - d) Any Software/Hardware firmware upgrade should be included at no extra cost.
 - e) The personnel deployed to site shall have thorough knowledge of the system and at least two years of experience in maintenance of similar system.
- 8.14.4 Quarterly prorated payment of finalised AMC amount will be made after successful completion of each quarter of respective post warranty AMC
- 8.14.5 BL reserves the right to order for the post warranty AMC along with the main order or after the completion of the warranty period of one year, and such decision solely is at BL's discretion. BL reserves the right to sign the post warranty AMC for all 2 years or part of it or none.

8.15 UPGRADES

- 8.15.1 Any upgrades to software/Hardware with respect to firmware and revisions during the period of contract, warranty and AMC should be provided by the successful bidder at no extra cost to BL.

8.16 TRAINING

- 8.16.1 The Successful Bidder will train BL personnel at two levels
- (a) Training for the security staff at the location.
 - (b) Training for BL nominated officers as desired by BL

8.17 SCALABILITY

- 8.17.1 **The system design shall permit the on-line addition of new system / subsystems (new work station, peripherals, cameras, encoders etc.) with no disruption to either the operation or system communications for future expansion. The offered software should have in-built capability / provision to take care for future expansion and new services & features etc. The user configurable menu driven modules should be available in the software for any addition/deletion/change in the Plant configurations. System should be scalable to meet additional business, safety and security requirement of the locations.**
- 8.17.2 **The system should be scalable to interface with BL network/Switches.**
- 8.17.3 **All system communications shall be based on the ISO, Open system Interconnect (OSI) reference model. All communication solutions should be Ethernet Based.**

8.18 BL DELIVERABLES /SCOPE

- 8.18.1 BL shall make available the site to the successful Bidder to carry out the job from administrative point of view.
- 8.18.2 Successful Bidder should specify the space requirement as infrastructure for implementing his system based on which, BL shall ensure adequate space inside the location for placing the computer and other related equipment

8.19 SYSTEM ACCEPTANCE CRITERIA

- 8.19.1 **The system will be accepted by BL based on the following criteria:**
- **All systems to be verified operational as defined in the Scope of Work above.**
 - **Surveillance system installed and functioning, as described in the FDS submitted.**
 - **All manuals and drawings are delivered to BL.**
 - **All software licenses are delivered to BL.**
 - **Proper Training imparted to the location staff**

Annexure – I

Sub: Supply, Installation, Testing & Commissioning of IP based Wireless Surveillance CCTV System.

REQUIREMENT FOR INTELLIGENT CCTV COMPONENTS:

Bidder's Name :

Sr. No.	Description of Items.	Qty.	Unit s.	Rate	Amount In Rs.
1	2mp full HD 30 X speed dome IR PTZ camera	01	Nos.		
2	2MP Full HD 20X speed dome IR PTZ camera	02	Nos.		
3	2mp IR bullet camera	07	Nos.		
4	2Mp IR Dome camera waterproof & vandal proof	06	Nos.		
5	Transmitter (wireless Radio)	10	Nos.		
6	Receiver with 360 degree Omini directional integrated antenna.	02	Nos.		
7	16 channel NVR with support 08 SATA HDD	01	Nos.		
8	6U rack	01	Nos.		
9	Weatherproof junction box (100X100x70)	16	Nos.		
10	Weather proof junction box (200x200 X 70)	05	Nos.		
11	GI Pole 12 feet 2"with fabrication work	04	Nos.		
12	Mounting for PTZ camera	04	Nos.		
13	32 " LED TV.	03	Nos.		
15	5/15 Amp switch socket	28	Nos.		
16	2KVA ON Line UPS with inbuilt battery.	01	Nos.		
17	8 Port - Network Switch 10/100/1000 mbps	05	Nos.		
18	USB joystick	01	Nos.		
19	32 channel Video Management Software	01	Nos.		
20	2TB surveillance Hard disk	03	Nos.		
21	High configured CPU with original OS	03	Nos.		
22	Cat 6 cable armored		Mtr		
23	Power supply cable 1.5 sqmm 02 core armored		Mtr		
24	Additional / Misallenious charges if any				
25	Total Basic for Supply Part				
26	Taxes & Duties for Supply Part [Mention Tax]				
A	Gross Value for Supply part [Basic + Taxes]				
27	Installation, Training & Commissioning				

	Charges				
28	Taxes & Duties for Commissioning				
B	Gross Value for Installation, Training & Commissioning [Basic + Tax]				
29	AMC Charges / Year [Including Supply + Service]- Post Warranty				
30	AMC Charges for Two Years [Post Warranty]				
31	Taxes & Duties for AMC [for 2 Years – post warranty]				
C	Gross Value for 2 years post warranty AMC [Basic + Taxes]				
D	Package in Total [A + B + C]				

Important Note:

1. Based on Pre-bid meet if any of the items /quantities mentioned in above table need to change, can be done & the same is to be mentioned in Annexure I at the time of submitting Price bid.
2. Annexure I duly filled to be attached with PRICE BID only.
3. Apart from Price part [Annexure I] all other relevant data [Annexure II to VI] along with the Tender Document duly signed & stamped to be attached/ send with Technical bid.
4. Bidder should ensure that total gross package value (value entered in row 'D' in aforesaid table in Annexure I) should be same value entered in E-Bid.

Annexure - II

Technical Specification

Technical Specification: IR PTZ camera (30 X or better)

Sr No	Feature	Minimum specification	Compliance	Deviation,If any
01	Image Sensor	1/2.8" Exmore CMOS		
02	Effective	1944(H) x 1092(V)		
03	Scanning	Progressive		
04	Electronic	1/1 ~ 1/30,000s		
05	Min.	Color: 0.05Lux@F1.6; B/W: <u>0.005Lux@F1.6</u>		
06	S/N Ratio	More than 50dB		
07	Video Output	BNC(1.0Vp-p/75Ω), PAL / NTSC		
	Camera Features			
08	Day/Night	Auto(ICR) / Color / B/W		
09	Backlight	BLC / HLC / DWDR (Digital WDR)		
10	White	Auto, ATW, Indoor, Outdoor, Manual		
11	Gain Control	Auto / Manual		
12	Noise	Ultra DNR (2D/3D)		
13	Privacy	Up to 24 areas		
14	Digital Zoom	16x		
	Lens			
15	Focal Length	4.3mm~129mm(30x Optical zoom)		
16	Max Aperture	F1.6 ~ F5		
17	Focus	Auto / Manual		
18	Angle of	H: 65.1° ~ 2.34°		
19	Close Focus	10mm~ 1500mm		
	PTZ			
20	Pan/Tilt Range	Pan: 0° ~ 360° endless; Tilt: -15° ~ 90°, auto flip 180°		
21	Manual	Pan: 0.1° ~160° /s; Tilt: 0.1° ~120° /s		
22	Preset Speed	Pan: 240° /s; Tilt: 200° /s		
23	Preset	80(DH-SD), 255(Pelco-P/D)		
24	PTZ Mode	5 Pattern, 8 Tour, Auto Pan, Auto Scan		
25	Speed Setup	Human-oriented focal length/ speed adaptation		
26	Power up Action	Auto restore to previous PTZ and lens status after power failure		
27	Idle Motion	Activate Preset/ Pan/ Scan/ Tour/ Pattern if there is no command in the specified period		
28	Time Task	Auto activation of Preset/ Pan/ Scan/ Tour/ Pattern by preset-time		
29	Protocol	DH-SD, Pelco-P/D (Auto recognition)		
30	IR Distance	100m (2 near IR LED+ 4 far IR LED)		

Sr No	Feature	Minimum specification		Compliance (yes/No)	Deviation ,If any
	Video				
31	Compression	H.264 / MJPEG			
32	Resolution	1080P(1920×1080) / 720P(1280×720) / D1(704×576/704×480) /CIF (352×288/352×240)			
33	Frame Rate	Main Stream	1080P/720P(1 ~ 25/30fps)		
34		Sub Stream	D1/CIF(1 ~ 25/30fps)		
35	Bit Rate	H.264: 56K ~ 8192Kbps, MJPEG: 56K ~ 8192Kbps			
	Audio				
36	Compression	G.711a / G.711u(32kbps)/ PCM(128kbps)			
37	Interface	1/1 channel In/Out			
	Network				
38	Ethernet	RJ-45 (10/100Base-T)			
39	Protocol	IPv4/ IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS,			
40	ONVIF	ONVIF Profile S			
41	Max. User Access	20 users			
42	Smart Phone	iPhone, iPad, Android, Windows Phone			
	Auxiliary Interface				
43	Memory Slot	Micro SD, Max 64GB			
44	RS485	1			
45	Alarm	2/1 channel In/Out			
	General				
46	Power Supply	AC 24V/2.2A (±10%)			
47	Power	10.5W, 26W (IR on, Heater on)			
44	Working	-40°C ~ 60°C / Less than 90% RH			
45	Ingress Protection	IP66			
46	Certification	UL ,CE, FCC			

Sr No	Feature	Minimum specification	Compliance (yes/No)	Deviation,If Any
1	Image Sensor	1/3" 2Megapixel CMOS		
2	Effective Pixels	1920(H)x1080(V)		
3	Scanning	Progressive		
4	Electronic	Auto/Manual, 1/3~1/10000s		
5	Min. Illumination	0. 01Lux/F1.2 (Color), 0.001 Lux/F1.2 (B/W)		
6	S/N Ratio	More than 50dB		
7	Video Output	1 channel BNC (1.0Vp-p , 75Ω)		
Camera Features				
8	Max. IR LEDs	100m		
9	Day/Night	Auto(ICR)/Color/B/W		
10	Backlight	BLC / HLC / DWDR		
11	White Balance	Auto/Manual		
12	Gain Control	Auto/Manual		
13	Noise Reduction	3D		
14	Privacy Masking	Up to 4 areas		
Lens				
15	Focal Length	3.3~12mm (7~22mm optional)		
16	Max Aperture	F1.4		
17	Focus Control	Manual		
18	Angle of View	H: 87.5° ~ 31.1°(46.1° ~ 16.7°optional)		
19	Lens Type	Manual/Auto Iris(DC)		
20	Mount Type	Board-in Type		
Video				
21	Compression	H.264/ H.264H/ MJPEG		
22	Resolution	1080P(1920×1080)/720P(1280×720)/ D1 (704×576)/CIF(352×288)		
23	Frame Rate	Main 1080P/720P(1 ~ 25/30fps)		
		Sub D1/CIF(1 ~ 25/30fps)		
24	Bit Rate	H.264: 32K ~ 8192Kbps		
Audio				
25	Compression	G.711a/G.711u(64kbps)/PCM(128kbps)		
26	Interface	1/1 channel In/Out		
Network				
27	Ethernet	RJ-45 (10/100Base-T)		
28	Wi-Fi	N/A		
29	Protocol	IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP		
30	ONVIF	ONVIF Profile S		

IR bullet camera:

Sr No	Feature	Minimum specification	Compliance (yes/No)	Deviation,If any
31	Max. User Access	20 users		
32	Smart Phone	iPhone, iPad, Android, Windows		
	Auxiliary Interface			
33	Memory Slot	Micro SD, Max 32GB		
34	RS485	N/A		
35	Alarm	2/1 channel In/Out		
36	PIR Sensor Range	N/A		
	General			
37	Power Supply	DC12V, PoE (802.3af)		
38	Power Consumption	<16W		
39	Working Environment	-20°C~+60°C, Less than 95% RH		
40	Ingress Protection	IP66		
41	Certification	UL ,CE, FCC		

IR Dome camera:

Sr No	Feature		Minimum specification	Compliance (yes/No)	Approved Make
1	Effective Pixels		1920(H)x1080(V)		Axis Bosch,Pelco or eqv.
2	Scanning System		Progressive		
3	Electronic Shutter Speed		Auto/Manual 1/3~1/10000		
4	Min. Illumination		0.1lux/F1.4(color), 0Lux/F1.4(IR on)		
5	S/N Ratio		More than 50db		
6	Video Output		1 channel BNC(1.0Vp-p, 75Ω)		
	Camera Features				
7	Max. IR LEDs Length		20m		
8	Day/Night		Auto(ICR)/Color/B/W		
9	Backlight Compensation		Off/BLC/HLC/DWDR		
10	White Balance		Auto/Manual		
11	Gain Control		Auto/Manual		
12	Noise Reduction		3D		
13	Privacy Masking		Up to 4 areas		
	Lens				
14	Focal Length		2.7~12mm		
15	Max Aperture		F1.4		
16	Focus Control		Manual		
17	Angle of View		H: 105.6°(Wide)~27.4°(Tele)		
18	Lens Type		Manual/Auto Iris (DC)		
19	Mount Type		Board-in Type		
	Video				
20	Compression		H.264/ MJPEG		
21	Resolution		1080P(1920×1080)/ D1(704×576)		
22	Frame Rate	Main Stream	1080P(1 ~ 25/30fps)		
		Sub Stream	D1(1 ~ 25/30fps)		
23	Bit Rate		H.264: 16K ~ 8192Kbps		
	Audio				
24	Compression		G.711a/G.711u(64kbps)/PCM(128kbps)		
25	Interface		1/1 channel In/Out		
	Network				
26	Ethernet		RJ-45 (10/100Base-T)		
27	Wi-Fi		N/A		
28	Protocol		IPv4/Ipv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UpnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS, Bonjour		
29	ONVIF		ONVIF Profile S		
30	Max. User Access		20 users		
31	Smart Phone		iPhone, iPad, Android, Windows Phone		
32	Certification		UL CE FCC		

Technical Specification: IR PTZ camera (20 X or better)

Sr No	Feature	Minimum specification	Compliance (yes/No)	Approved Make
33	Sub Stream	D1/CIF(1 ~ 25/30fps)		
34	Bit Rate	H.264: 56K ~ 8192Kbps, MJPEG: 56K ~		
Audio				
35	Compression	G.711a / G.711u(32kbps)/ PCM(128kbps)		
36	Interface	1/1 channel In/Out		
Network				
37	Ethernet	RJ-45 (10/100Base-T)		
38	Protocol	Ipv4/ Ipv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UpnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS, Bonjour, 802.1x		
39	ONVIF	ONVIF Profile S		
40	Max. User Access	20 users		
41	Smart Phone	iPhone, iPad, Android, Windows Phone		
Auxiliary Interface				
42	Memory Slot	Micro SD, Max 64GB		
43	RS485	1		
44	Alarm	2/1 channel In/Out		
General				
45	Power Supply	AC 24V/2.2A (±10%)		
46	Power Consumption	10.5W, 26W (IR on, Heater on)		
47	Working Environment	-40°C ~ 60°C / Less than 90% RH		
48	Ingress Protection	IP66		
49	Certification	UL CE FCC		

Technical Specs (Wireless Link)

SI No	Product	Minimum Specs	Compliance (yes/No)	Approved Make
01	Transmitting station	Frequency : 2.4 GHz Gain : 11dBi		Variant Ubiquity Alvarion
02	ACCESS POINT OUT DOOR Omni 360 degree with integrated antenna	<ul style="list-style-type: none"> Processor Specs: Atheros MIPS 24 KC, 400MHz Frequency: 2.4Ghz Memory Information: 64MB SDRAM, 8MB Flash Networking Interface: 1 X 10/100 BASE-TX (Cat. 5, RJ-45) Ethernet Interface Approvals: FCC Part 15.247, IC RS210, CE 		Variant Ubiquity Alvarion

TECHNICAL SPECS FOR NVR

Sr No	Feature	Minimum specification	Compliance (yes/No)	Deviations, If Any
1.	Main Processor	Dual-core embedded processor		
2.	Operating System	Embedded LINUX		
	Video & Audio			
3.	IP Camera Input	16 channel		
4.	Two-way Talk	1 channel Input, 1 channel Output, BNC		
	Display			
5.	Interface	1 HDMI, 1 VGA, 1TV		
6.	Resolution	1920×1080, 1280×1024, 1280×720, 1024×768		
7.	Display Split	¼/8/9/16		
8.	OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording		
	Recording			
9.	Compression	H.264 / MJPEG		
10.	Resolution	5MP(2560×1920)/3MP(2048×1536)/1080P(1920×1080) / 720P(1280×720) / D1 (704×576/704×480)		
11.	Record Rate	Max 240fps@1080p, 480fps@720p, 960ps@D1		
12.	Bit Rate	48~ 8192kbps		
13.	Record Mode	Manual, Schedule(Regular(Continuous), MD, Alarm), Stop		
14.	Record Interval	1~120 min (default: 60 min), Pre-record: 1~30 sec, Post-record: 10~300 sec		
	Video Detection & Alarm			
15.	Trigger Events	Recording, PTZ, Tour, Alarm, Video Push, Email, FTP, Buzzer & Screen tips		
16.	Video Detection	Motion Detection, MD Zones: 396(22×18), Video Loss & Camera Blank		
17.	Alarm Input	16 channel		
18.	Relay Output	6 channel		
	Playback & Backup			
19.	Sync Playback	¼/8/16		
20.	Search Mode	Time/Date, Alarm, MD & Exact search (accurate to second), Smart search		
21.	Playback Function	Play, Pause, Stop, Rewind, Fast play, Slow play, Next file, Previous file, Next		
23.	Backup Mode	USB Device / eSATA Device / Internal SATA burner/ Network		
	Network			
24.	Ethernet	2 RJ-45 port (10/100M/1000M)		
25.	Network Function Max. User Access	HTTP, TCP/IP, Ipv4/Ipv6, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, 20 users		

26 .	Smart Phone	iPhone, iPad, Android, Windows Phone		
	Storage			
27 .	Internal HDD	8 SATA ports (8HDDs or 6HDDs+1CD/DVD-RW), up to 32TB	Should be HDD s for CCTV recordings	
28 .	External HDD	1 eSATA port (Max 4 SATA HDDs), up to 16TB	Should be HDD s for CCTV recordings	
29 .	USB	4 ports (2 Rear), USB2.0		
30 .	RS232	1 port, For PC communication & Keyboard		
31 .	RS485	1 port, For PTZ control		

STATEMENT OF DEVIATIONS

The following are the particulars of deviations from the requirements of the tender documents.

Note: Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviations".

Signature & Seal of Bidder

Annexure-IV

BANK GUARANTEE FOR CONTRACT PERFORMANCE

(To be stamped in accordance with Stamp Act)

(The non-judicial Stamp Paper should be in the name of issuing bank)

**PROFORMA OF BANK GUARANTEE FOR CONTRACT PERFORMANCE
GUARANTEE BOND**

Ref:..... Date.....

Bank Guarantee No.....

To,

The _____,

Balmer Lawrie & Company Limited,

(A Govt. of India Undertaking),

SBU-Grease & Lubricants

P-43 Hide Road Extension,

Kolkata -700088

WHEREAS (Name of Supplier) hereinafter called

"the Supplier has undertaken, in pursuance of Contract No..... dated

..... 2014 to supply (Description of
Goods and Services) hereinafter called "the Contract",

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a Bank Guarantee by a recognised Bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract,

AND WHEREAS we have agreed to give the Supplier a Guarantee,

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of..... (amount of the Guarantee in Words and Figures) and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limit of..... (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the day of 2014.

Signature and seal of Guarantors

Date..... 2014

Address.....

Signature & Seal of Bidder

Annexure-V

Authorization Letter Format for CCTV (To be executed on OEM letter head)

OEM Ref No.: - Dated:-

To,

The _____,

Balmer Lawrie & Company Limited,

(A Govt. of India Undertaking),

SBU-Grease & Lubricants

P-43 Hide Road Extension,

Kolkata -700088

Sub: Authorization to System Integrator for below mentioned tender.

Tender Name & No. _____ Dated_____

Dear Sir,

This is with reference to your above tender enquiry, we certify that M/s

_____ having there registered office at

_____ is an authorized partner to bid against

your

tender enquiry referred above on behalf of us.

We confirm that the CCTV equipments supplied by system integrator will be

supported by us, for the next 3 years from the date of installation & commissioning.

Thanking You,

(Seal & Stamp with date)

Signature & Seal of Bidder

Annexure-VI

Authorization Letter Format for Wireless (To be executed on OEM letter head)

OEM Ref No.:- Dated:-

To,

The _____,

Balmer Lawrie & Company Limited,

(A Govt. of India Undertaking),

SBU-Grease & Lubricants

P-43 Hide Road Extension,

Kolkata -700088

Sub: Authorization to System Integrator for below mentioned tender.

Tender Name & No. _____ Dated_____

Dear Sir,

This is with reference to your above tender enquiry, we certify that M/s

_____ having there registered office at

_____ is an authorized partner to bid against

your

tender enquiry referred above on behalf of us.

We confirm that the wireless equipments supplied by system integrator will be supported by us, for the next 3 years from the date of installation & commissioning.

Thanking You,

(Seal & Stamp with Date

Signature & Seal of Bidder